RESPONSE TO COMMENTS

EPA received comments on the Cook Inlet Pipeline Company (CIPL), Drift River Terminal Permit, AK-00039-6 from Unocal - CIPL, the Cook Inlet Regional Citizens Advisory Council (RCAC) and Cook Inlet Keeper on behalf of the Alaska Center for the Environment, Alaska Community Action on Toxics, Kachemak Bay Conservation Society, the National Marine Wildlife & Habitat Committee of the Sierra Club and Trustees for Alaska. Dan R. Williamson of Anchorage, Alaska, and David L. Brimberry of Eagle River, Alaska, wrote letters in support of the permit reissuance.

EPA received a letter, dated April 15, 1998, from the National Marine Fisheries Service (NMFS) regarding endangered species in the project area. The letter states that NMFS feels that the discharge will have no significant effect on marine mammal populations and behavior.

On June 17, 1998, the Division of Governmental Coordination (DGC) issued its Final Consistency Determination which found the permit consistent with the Alaska Coastal Management Program (ACMP).

On June 23, 1998, the Alaska Department of Environmental Conservation (ADEC) issued a Certificate of Reasonable Assurance for proposed discharges from the Drift River Terminal.

Comments from Unocal - CIPL

1. **Comment:** CIPL suggests that the oil and grease limitation should not be used as a technology-based limitation because (a) facilities with similar discharges do not contain this limitation, (b) the monthly average has been below the Minimum Level (ML) of the method used to analyze oil and grease and (c) oil and grease is not a good measure of the technology used at the facility, which could be done with another parameter such as BTEX.

   Response: The final permit contains oil and grease limits identical to those contained in the 1988 permit: 7 mg/l monthly average, and 9 mg/l daily maximum. The oil and grease limitations in the 1988 permit and the draft permit are technology-based BPJ limits. Section 402(o) prohibits backsliding from these limits except in certain limited circumstances, none of which apply to this permit.

   EPA has also determined that BTEX is not an appropriate substitute for oil and grease at this facility because there does not appear to be a correlation between the BTEX and oil and grease data. For example, during the month when CIPL exceeded the daily maximum for its oil and grease limitation, Total Hydrocarbons (TH) were reported at 1 µg/L and BTEX was none detectable. If

there were a correlation between these parameters, it is expected that when one was high, all would be. Also, when an exceedence of BTEX was reported in January 1995 and exceedences of both BTEX and TH were reported in August 1996, the level of oil and grease reported was 1 mg/L.

CIPL is correct in their assertion that the proposed permit limitations fall below the ML of the n-hexane method (method 1664) for oil and grease. The current method using Freon extraction is being phased out and the n-hexane method, although it has not been promulgated, has been approved for use by EPA through the alternate test methods procedures outlined in 40 CFR Part 136.5. Method 1664, included in the permit, has a published MDL of 1.6 mg/L and an ML of 5 mg/L. Because the proposed permit limits fall below the ML, and because of the uncertain quality of the data used to calculate the proposed limits (many data points were below the ML), the effluent limitations in the final permit will revert to the previous limitations of 7 and 9 mg/L for the average monthly and daily maximum limitations, respectively.

2. **Comment:** CIPL requests that the Chemical Oxygen Demand monitoring included in the draft permit be deleted from the final permit because the effluent contains high concentration of chloride ions and EPA Method 410 is not appropriate for high chloride samples. In addition, the ballast water contains natural organic materials that the treatment system is not designed to remove and EPA Method 410.1 states, “Traces of organic material either from the glassware or atmosphere may cause a gross, positive error.”

Response: There will be no COD monitoring included in the final permit. 40 CFR 419.13(d) states, “In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the Regional Administrator may substitute TOC as a parameter in lieu of COD. Effluent limitations for TOC shall be based on effluent data from the plant correlating TOC to BOD_5.” The effluent from CIPL’s ballast water treatment plant has chloride levels much higher than 1000 mg/L. Since the parameter in lieu of COD is based on a correlation with BOD_5 and there is not a concern with the level of BOD_5, the EPA has determined that COD monitoring is not necessary.

3. **Comment:** CIPL requests clarification of the sample frequency for the Sanitary and Domestic Wastewater discharge from the Christy Lee Platform (outfall 002) saying that the permit requires sampling daily when there may not be a discharge on a daily basis.

Response: The final permit has been clarified by adding a footnote to the table at Part I.B.2. which states that monitoring shall only occur during discharge.

4. **Comment:** CIPL notes that the test species for Whole Effluent Toxicity (WET) are freshwater organisms while the effluent is saline.

Response: The organisms have been changed to reflect the saline nature of the discharge.

5. **Comment:** CIPL requests that the language of the WET section of the permit be changed to reflect the intermittent nature of the discharge and that toxicity testing should be conducted semi-annually when ballast water and any of the identified test species are available

Response: The species included in the permit for WET testing have varying availabilities which attempts to account for their availability when testing is required so semi-annual monitoring should be feasible.

6. **Comment:** CIPL requests that the first year of WET testing be used as the screening period and that subsequent testing be conducted only on the most sensitive species.

Response: Since semi-annual monitoring is required, screening will be done during alternating seasons in the first, third and fifth years of the permit. If the screening is done in the Fall/Winter of the first year, every attempt should be made to screen during the Spring/Summer of the third year and then again during the Fall/Winter of the fifth year.

7. **Comment:** CIPL requests that if no significant toxicity is identified after the first year of WET testing that the permit include an option to request a reduction in toxicity testing frequency to one time per year.

Response: An appropriate statistical sample size to determine if a permit limitation is necessary is 10 which corresponds to semi-annual monitoring over the 5-year permit period. With the reduction in the screening requirements, semi-annual monitoring should now be a less onerous requirement and will remain in the permit.

8. **Comment:** CIPL feels that a toxicity trigger should not be established until enough data has been generated to support the development of a whole effluent toxicity limit and requests that the toxicity trigger not be defined in the new permit.

Response: A toxicity trigger is included in the permit to initiate a TIE/TRE if

necessary to determine the cause of any degradation of the effluent. The toxicity trigger has been redefined at 1.5 TU_C because a NOEC at 100% effluent would always result in a TU_C of 1 thus always triggering accelerated testing. A TU_C of 1.5 corresponds to toxicity in 66% effluent. This dilution has been added to the dilution series and replaces 6.25% effluent.

9. **Comment:** CIPL requests that Permit Part I.C.4.b. be modified to recognize that sampling the next six discharges may not occur for several months due to the intermittent nature of the discharge and species availability.

Response: This change has been made to Permit Part I.C.4.b.

10. **Comment:** CIPL requests that the reporting requirement of the results of toxicity testing be included along with the DMR for the month in which the results are received instead of with the DMR for the month in which the tests were conducted.

Response: This change has been made to Permit Part I.C.5.b.

11. **Comment:** CIPL requests that the full report be submitted within 60 days of the end of the Toxicity Test Period rather than the 30 days which is in the draft permit.

Response: This change has been made to Permit Part I.C.5.c.

12. **Comment:** CIPL requests that the definitions for 1/batch and 3/batch be revised to reflect that they may not treat ballast water from every ship separately.

Response: The definitions of *1/batch* and *3/batch* have been changed to reflect the operation. A definition of the term *discharge event* has been added to the permit. In addition, the permittee will note the length of the discharge event on the DMR when a discharge does occur.

1/batch means once per discharge event.

3/batch means three times per discharge event.

Discharge event means the interval between the beginning and the end of the intermittent discharge of treated ballast water.

Comments from Cook Inlet Keeper - the Keeper

13. **Comment:** The Fact Sheet discusses the technology-based limitations used to derive permit effluent limitations and the Keeper objects to EPA's consideration of technology that is "nearly" BAT.

Response: The comment quotes part of a sentence which says ". . . nearly equivalent to BAT/BCT for petroleum refining point sources." These Effluent Limitation Guidelines (ELG) for Petroleum Refining Point Sources found in 40 CFR § 419 do not directly apply to the Drift River Terminal. EPA has determined that the current operating performance is the basis for BAT/BCT so a statement that this is "nearly equivalent" to 40 CFR § 419 is only a comparison.

14. **Comment:** The Keeper suggests that EPA did not factor into the BPJ determination the 17 months when discharges did not occur and structural changes which have occurred since January 1992.

Response: With the intermittent nature of the discharge, it is likely that any chosen 5 year period would contain months when no discharge occurred. The calculations were based on the months when a discharge did occur (for example, the averages were calculated over the months with data not over the entire 60 month period). EPA has decided that effluent limitations developed as part of the BPJ determination for the 1988 permit apply to oil and grease (See Response to comment 1).

15. **Comment:** The Keeper recommends analytical monitoring for the sanitary and domestic wastewater discharge from the Platform Christy Lee.

Response: CIPL requested and ADEC granted, in its § 401 Certification of the permit, a waiver from secondary treatment for outfall 002. The parameters requested for monitoring are primarily those required for secondary treatment. Under their Wastewater Disposal Regulations (18 AAC 72), ADEC authorized the use of a Marine Sanitation Device (MSD), defined in 40 CFR §140 and 33 CFR § 159, followed by dechlorination and did not proscribe monitoring.

16. **Comment:** The Keeper comments that the Fact Sheet contains erroneous information on the required methods for hydrocarbon sampling saying that TAqH should be the sum of results of EPA Methods 602 and 610 while Method 610 should be used to determine TAH.

Response: The Fact Sheet on page 8 states, "Concentrations of TAqH must be determined and summed using a combination of EPA Method 602 (plus Xylenes) to quantify monoaromatic hydrocarbons and

EPA Method 610 to quantify polynuclear aromatic hydrocarbons" [emphasis added]. The Alaska WQS [18 AAC 70.020(b), Note 8], requires that TAH be measured using EPA Method 602 (plus xylenes).

17. **Comment:** The Keeper comments that CIPL should have a total of 12 carbon filters so that two can be operating in series with the existing six shown in the schematic attached to the Fact Sheet.

Response: The flow diagram depicting this part of the treatment system was drawn as if the carbon filters were operating in parallel. This is not the case. The filters operate in a series of two filters with two on standby and two being maintained. According to CIPL, the filters are capable of handling the maximum system flow which is 200 gpm so it is not necessary to have all six filters operating simultaneously with an additional six in series. CIPL has provided a new schematic to show the actual operations, this is included in this Response to Comments as Attachment A.

18. **Comment:** The Keeper recommends that any purge water from groundwater wells be fully characterized before it is treated and discharged. Also, additional specific limitations should be included to insure adequate treatment of all components.

Response: The company performs an analysis of this water and holds the water until the analytical results are returned to determine which method of disposal will be used. Since no water may be disposed of through the treatment system that is not compatible with the treatment, no additional limitation will be required.

19. **Comment:** The Keeper suggests that if tankers are utilized to transport materials other than crude oil, the permit should require a characterization of the ballast water prior to mixing in the initial storage tank.

Response: CIPL requires the Master of Vessel to sign a Ballast Report which lists such things as the vessel's last cargo, where ballast was taken into the tanks and the amount of ballast to be discharge to the Drift River Terminal. CIPL has the right to refuse the ballast water if it is incompatible for treatment.

20. **Comment:** The Keeper comments that if tankers transport sour crude, the ballast water could be contaminated with sulfur so the emissions from the air stripper could cause health impacts for workers in the area. They feel that the Fact Sheet and permit should address this issue.

Response: Permit Part IV. N. requires that the permittee follow all applicable state laws. This includes any regulations that the state has promulgated to administer the Clean Air Act in the state of Alaska. In these regulations, 18 AAC 50.110 states that "No person permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property." CIPL submitted a Title V air permit application on September 26, 1997 and it was deemed fundamentally complete on February 11, 1998. They are presently operating under an application shield which means they must meet all requirements of the application which includes the language found in 18 AAC 50.110. Since this concern is included in the application shield, no requirements will be included in this permit.

21. **Comment:** The Keeper requests that a batch size be defined or, in the alternative, the permit require more monitoring for larger batches.

Response: See the response to Comment 12. A requirement to note the interval of the discharge has been added to see if additional monitoring may be necessary in future permitting actions.

22. **Comment:** The Keeper suggests that EPA require the discharge point be extended in order to avoid discharging in a location hydrologically connected to the ground water.

Response: The hydrology of the area is such that the groundwater surfaces in the ditch and flows to Redoubt Bay. The discharge would flow into the surface water and out to the Bay rather than flowing back into the groundwater. EPA believes that the groundwater will not be contaminated by the discharge.

23. **Comment:** The Keeper says that EPA must require CIPL to add technologies to address each parameter type for which exceedance have occurred since the facility violated the permit's effluent limitations 35 times from 1992 through 1996.

Response: Over 90% of the exceedences were for Total Hydrocarbons which is a parameter no longer included in the WQS or the permit. CIPL anticipates adequate treatment so the TAqH and TAH limitations will be met. The other exceedences were of three different parameters, during three different months and years so there is no indication of an on-going problem with treatment capabilities.

24. **Comment:** The Keeper recommends that, in addition to Permit Part I.D. Best Management Practices, that personnel at the Drift River Terminal

undergo thorough and regular training to ensure proper ongoing and emergency response operations at the facility. They believe this particularly important since there is public speculation about Unocal's future in Alaska.

Response: Permit Part IV.N. requires CIPL to be in compliance with State Law. CIPL has a state of Alaska Contingency Plan (C-Plan) in place which was approved by ADEC in 1998. According to ADEC (personnel conversation with Mike Munger), CIPL employs a response action contractor, Cook Inlet Spill Prevention Response, Inc., to provide for their needs under the C-Plan, inlcuding training. If the facility were to undergo a change in management, the C-Plan would be open for public review if the new management changed the arrangements under the present C-Plan. Since a plan dealing with this issue is already in place, the permit will contain no new requirements.

25. **Comment:** The Keeper states that the permit contains a 30 day average for pH as well as oil and grease and requests that similar requirements be included for TSS, COD, TAH and TAqH so that mass loadings may be determined.

Response: The table containing the effluent limitations has caused some confusion. pH is measured as a minimum and a maximum not as an average. A range was given in the table but this requirement is being moved out of the table to make it clear that an average is not required.

The reporting requirements have also been changed to require that the average and maximum be reported be reported for TAH and TAqH although only the maximum will be limited. TSS shall remain as a maximum which was a requirement of the previous permit.

26. **Comment:** The Keeper says that EPA must include an effluent limitation for COD since the ELG used for BAT contains a limitation for COD and the WQS include a criteria for DO.

Response: The ELGs in 40 CFR § 419 contain a limitation for COD but these ELGs have not been applied directly to this discharge so an effluent limitation does not have to be included in the permit. The WQS do contain a standard for DO but no where in the WQS does it require a limit on COD as a means to insure water quality.

27. **Comment:** The Keeper requests that EPA require regular reporting of all continuous monitoring from the gas chromatograph that is used to monitor water exiting the carbon filters.

Response: Permit Part II.D., Additional Monitoring by the Permittee, states "If the Permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated." BTEX sampling is not required by the permit and the monitoring is an internal check that CIPL performs for their own information. Therefore, the results of this internal monitoring will not be required as a submittal with DMR results.

28. **Comment:** The Keeper recommends that the permit should require acute toxicity testing as well as chronic testing.

Response: EPA's Technical Support Document (TSD) for Water Quality-based Toxics Control recommends using chronic (rather than acute) testing when there is no mixing zone as is the case with this permit (EPA TSD Section 3.3.3, Step 2). Moreover, the state of Alaska does not have an acute toxicity requirement.

29. **Comment:** The Keeper suggests that EPA should include controls or safeguards against the introduction of non-indigenous species into the waters of Cook Inlet.

Response: In the Federal Register on April 10, 1998, the Coast Guard proposed [63 FR 17782] a voluntary ballast water management program for all vessels entering U.S. waters from outside the exclusive economic zone (EEZ) including transits between Alaska and any other port in the United States. This voluntary program would ask the masters of all vessels with ballast tanks to perform complete ballast water exchange at sea prior to entering U.S. waters. Also proposed is a mandatory reporting requirement. These reports would be used to monitor compliance with the voluntary program. If the rate of compliance is found to be inadequate, or if vessel operators fail to submit mandatory reports to the Coast Guard, the voluntary guidelines will become mandatory.

This program, when finalized, should reduce the risk of the introduction of non-indigenous species into the waters of Cook Inlet. A general reopener clause has been added to the permit (Permit Part IV.O.) so the permit could be reopened [40 CFR § 122.44(c)] or revoked and reissued [40 CFR § 122.62(b)] to reflect new information. This reopener clause covers the entire permit so the clause included in the draft permit for WET testing has been removed.

30. **Comment:** The Keeper states that the Fact Sheet does not describe which effluent limitations are water quality based and which are technology based. The request that EPA provide this information in the context of anti-backsliding.

Response: The following table has been created to consolidate the information requested, which can be found in Section G of the Fact Sheet, Specific Effluent Limitations.

Water Quality-based	Technology-based
Petroleum Hydrocarbons pH Residue	Oil and Grease Total Suspended Solids

There is also a monitoring only requirement for Whole Effluent Toxicity (WET) which is water quality-based.

Section 402(o) of the Clean Water Act states that a permit may not be reissued with effluent limitations less stringent than comparable effluent limitations in the pervious permit. The effluent limitations for pH, Residue, Oil and Grease and Total Suspended Solids have all remained the same as the previous permit. The Petroleum Hydrocarbons limitation changed somewhat because the state of Alaska changed the methodology for measuring this parameter. Even so, it meets the qualifications of being a comparable effluent limitation and the present permit contains a more stringent effluent limitation because no mixing zone has been incorporated into the calculation to develop the limitation.

Comments from Cook Inlet Regional citizens Advisory Council - RCAC

31. **Comment:** RCAC asks how EPA intends to evaluate TAH and TAqH when the individual analytes are below the detection limits in light of the fact that the sum of the detection limits for the individual analytes within each method add up to greater than the effluent limitation.

Response: The Method Detection Levels (MDL) of the individual analytes in EPA Method 602 add up to 1.9 µg/L while including xylenes gives an MDL of 2.1 µg/L. The MDLs for individual analytes in EPA Method 610 add up to 8.26 µg/L. TAH is measured using just EPA Method 602 (plus xylenes) so the level of 2.1 µg/L is well below the average monthly limitation (AML) of 10 µg/L. TAqH is measured using the sum of EPA Method 602 (plus xylenes) and EPA Method 610 so the sum of the MDLs would be 10.36 µg/L. This is below the AML of 15 µg/L.

32. **Comment:** RCAC requests the inclusion of a 30 day average value for TAH and TAqH.

Response: See response to Comment 25.

33. **Comment:** RCAC states that the organisms used in WET testing should be marine organisms and not freshwater organisms.

Response: See response to Comment 5.

34. **Comment:** RCAC recommends the use of organisms that are representative of organisms that live downstream of the effluents in Cook Inlet.

Response: While this would be highly desirable, the number of EPA approved West Coast species are few and for Alaska fewer still. The species are chosen to give representative results of the toxicity of the effluent.

35. **Comment:** RCAC states that many toxic compounds exhibit toxicity at levels far below the 100 ppb level found in Permit Part IV. A., Changes in Discharges of Toxic Substances.

Response: The language of Permit Part V.A. is contained in regulation found at 40 CFR § 122.42(a) and must be contained in all NPDES permits for existing manufacturing, commercial, mining, and silvicultural dischargers.

36. **Comment:** RCAC requests public notification if EPA authorizes any discharges from the facility other than those covered by the permit.

Response: Discharges other than those covered by the permit are not authorized by EPA. Even though there are provisions in the permit that recognize that bypasses and upsets may occur and provides for the reporting of these incidents, they are not authorized by the permit unless they meet the very stringent criteria listed in Permit Parts III.G., Bypass of the Treatment Facility, and III.H., Upset Conditions. If the permittee requires the addition of a discharge point or a change is made to the current discharge that would change its characteristics, then the permit would undergo a modification process according to 40 CFR § 124.5(c) which requires a public notice.

37. **Comment:** RCAC suggests that the permit should stipulate that CIPL should be aware if a tanker previously contained product other that crude oil.

Response: See Response to Comment 19.

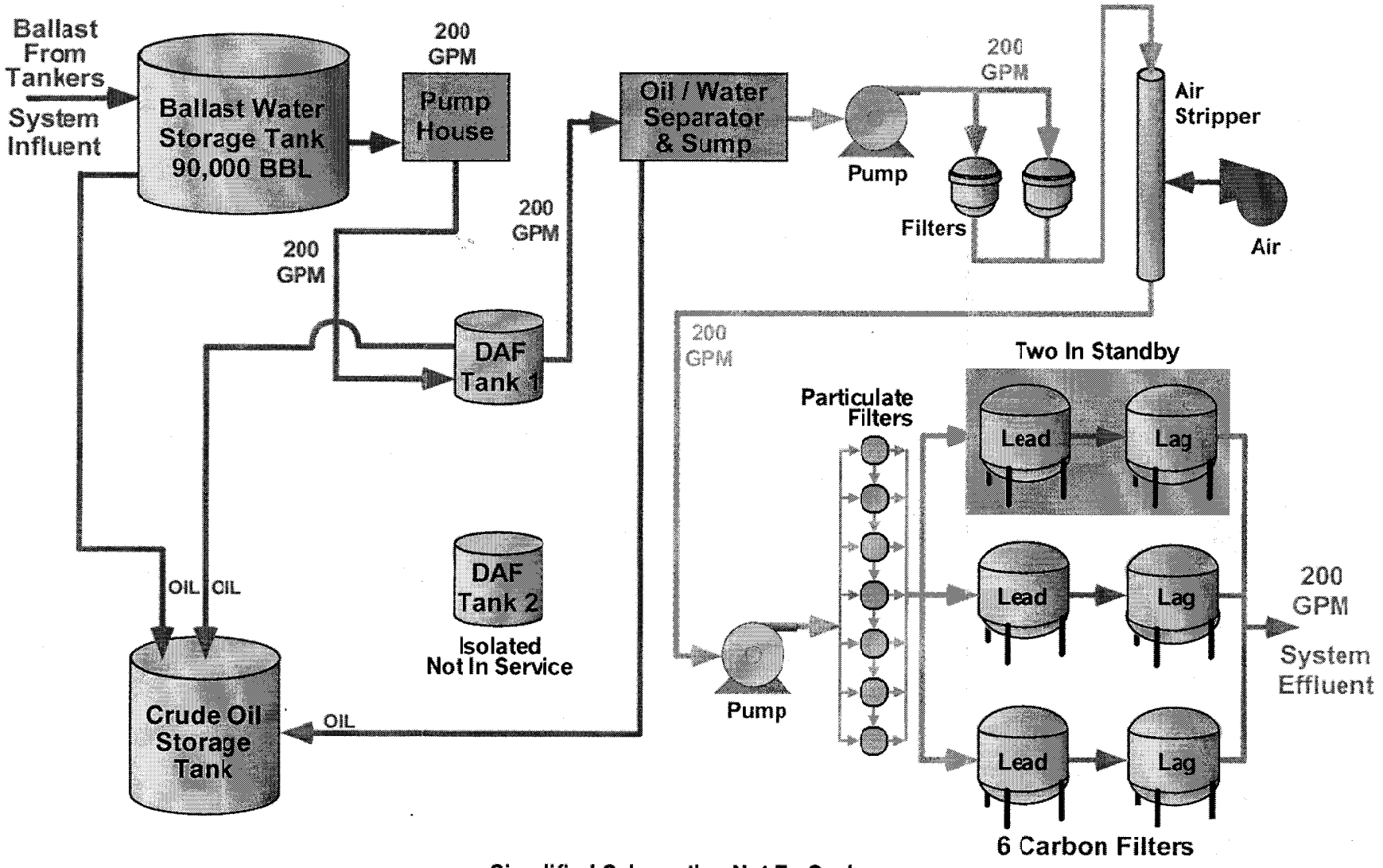
38. **Comment:** RCAC notes that the schematic of the Drift River Terminal was incorrect in its illustration of the carbon filters.

Response: See response to Comment 17 and Attachment A of this Response to Comments.

39. **Comment:** RCAC notes that the Fact Sheet fails to mention what the in-line gas chromatograph is measuring to 5 ppb.

Response: The facility measures BTEX with the gas chromatograph as an internal indicator of treatment.

BALLAST WATER TREATMENT SYSTEM



Simplified Schematic - Not To Scale
Details Not Included